## LOCOMOTIVE.

Mr. E. E. Gillon, Chief Mechanical Engineer, reports as follows:-

Locomotives.—On the 1st April, 1920, there were 616 engines in service, and on the 31st March, 1921, there were 608 engines. Eight second-hand tank engines were sold and written off stock.

In the Government railway workshops to date 191 engines have been built, and twenty-four old locomotives have been rebuilt. During the year 577 locomotives passed through the workshops, the details of work done being as follows:—

|                             |     |  | Number and Type.                                  |                    |                  |                  |                     |        |  |  |
|-----------------------------|-----|--|---|--------------------|------------------|------------------|---------------------|--------|--|--|
| Particulars.                |     |  | Four- cylinder Balanced- compound Tender Engines. | Tender<br>Engines. | Tank<br>Engines. | Fell<br>Engines. | Single<br>Fairlies. | Total. |  |  |
| Number passed through shops |     |  | 72  | 225                | 264              | 7                | 9                   | 577    |  |  |
| Re-erected                  | *   |  |   |                    | 1                |                  |                     | 1      |  |  |
| Thoroughly overhauled       |     |  | <b>2</b> 6  | 60                 | <b>5</b> 8       | 4                | 3                   | 151    |  |  |
| Heavy repairs               | • • |  | 15  | 51                 | 50               | 2                | 3                   | 121    |  |  |
| Light repairs               |     |  | 31  | 114                | 155              | 1                | 3                   | 304    |  |  |
| Painted                     |     |  | 19  | 58                 | 62               | 1                | 2                   | 142    |  |  |
| Paint touched up            |     |  | 43  | 130                | 86               | 5                | 7                   | 271    |  |  |

Included in the above are two engines for private lines and one engine for Public Works Department.

In addition to the engines repaired in the railway workshops, two engines were thoroughly over-hauled by Messrs. A. and G. Price (Limited). During the year a contract was entered into with the North British Locomotive Company (Limited), of Glasgow, for forty-five superheated tender engines, Pacific type, Class AB. The engines being built by Messrs. A. and G. Price, of Thames (referred to in last year's report), are now in hand. At the close of the year there were on order in the railway workshops twenty engines, consisting of ten simple-superheated tender engines, Pacific type, Class AB, and ten heavy tank engines, 4-6-4 type, Class WAB. Altogether there were on order on the 31st March, 1921, eighty-five engines.

The tractive power of locomotives decreased by 36,938 lb., equal to 0 42 per sent.

Boilers.—The work on renewals and repairs has been kept well up to date. The following statement shows details of boiler-work done:—

| Description. | Number<br>passed<br>through<br>Shops. | Built<br>new. | Heavy<br>Repairs. | Light<br>Repairs. | New<br>Tubes<br>(Sets). | Tubes pieced and Second- hand (Sets). | New<br>Smoke-<br>box<br>Tube-<br>plate. | New<br>Firebox. | New<br>Firebox<br>Tube-<br>plate. | Boilers<br>patched. |
|--------------|---------------------------------------|---------------|-------------------|-------------------|-------------------------|---------------------------------------|---|-----------------|-----------------------------------|---------------------|
| Boilers      | 339                                   | 3             | <b>13</b> 0       | <b>2</b> 06       | 64                      | 62                                    | 2                                       | 5 .             | 21                                | 124                 |

Thirty-eight new boilers were in hand at the close of the year, consisting of ten Class AB, five Class F, one Class FA, two Class H, three Class J, two Class R, five Class U, and ten Class WAB.

Carriages.—The stock on the 1st April, 1920, was 1,492, and on the 31st March, 1921, the number was 1,492. One new bogie car was built and added to stock. One four-wheel car was written off stock.

The following table shows details of car-work done during the year:—

| ÷                           |        |            | <b>Num</b> be      |        |     |       |
|-----------------------------|--------|------------|--------------------|--------|-----|-------|
| Particulars.                | Bogie. | Six-wheel. | Four-wheel.        | Total. |     |       |
| Number passed through shops |        |            | 2,117              | 91     | 18  | 2,226 |
| Built new                   |        |            | 1                  |        | 1   | 1     |
| ${f Reb}{f u}$ ilt          |        |            | 1                  |        | 1   | 1     |
| Re-erected                  |        |            |                    | 2      | 1 1 | 2     |
| Converted                   |        |            | 1                  |        |     | 1     |
| Thoroughly overhauled       | • •    |            | 346                | 1      |     | 347   |
| Heavy repairs               |        |            | 791                | 15     | 2   | 808   |
| Light repairs               |        |            | 977                | 73     | 16  | 1,066 |
| Painted                     |        |            | $\boldsymbol{622}$ | 8      | 2   | 632   |
| Paint touched up            |        |            | 884                | 11     |     | 895   |

Forty cars were under construction at the close of the year in the railway workshops.